

## **REMARKS**

### **A. Status of the Claims**

Claims 1-36 and 67-89 were examined. Claims 37-66 stand withdrawn. Claims 1, 20, 67, and 70 have been amended. Claims 90-108 have been added. Claims 1-36, and 67-108 will, therefore, be pending after entry of the requested amendments.

### **B. FIG. 50B Has Been Corrected**

FIG. 50B has been amended to address the Office's objection. The replacement sheet bearing revised FIG. 50B is attached as Appendix 1.

### **C. The Amendment to the Specification**

The specification has been amended to include the unit grams (specified as "g") as modifying the relevant Table 1 values. This amendment is supported by the text beneath Table 1 on page 30 of the application, and by FIG. 15 of U.S. Provisional Patent Application Serial No. 60/118,211 filed February 1, 1999, to which this application claims priority. FIG. 15 of this provisional application is attached as Appendix 2.

### **D. The Interview**

Applicants wish to thank Examiner Thaler for the telephonic interview he had with Applicants' representative on August 6, 2003. Applicants concur with Examiner Thaler's interview summary, but take this opportunity to clarify one issue. During the interview, Applicants' representative explained that the relevant claims could be amended to state that both ends of at least one wire are located to one side of all of the intersections of the wires. Applicants' representative did not, however, state that the claims were limited in that fashion as currently written, as might be inferred from Examiner Thaler's summary of the interview.

**E. Claims 1, 2, 5, 7, 10, 11, 18, 20, 21, 24, 25, 27, and 67-70 Are Patentable over Hansen**

These claims stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,968,088 to Hansen et al. (Hansen). Applicants respectfully traverse.

**1. Claim 1 and Its Dependents**

Claim 1 has been revised to distinguish Hansen. Claim 1 is directed to a device that includes a plurality of shape memory wires woven together to form a body suitable for implantation into an anatomical structure. The shape memory wires cross each other to form “a plurality of cells” and “at least one of the cells [is] defined by only four sides.” Support for this amendment is found throughout the figures in the application, such as FIG. 1A, which shows a number of cells that are defined by only four sides. Such cells may be somewhat diamond-shaped, as FIG. 1A shows.

Hansen fails to teach or suggest the claimed cell. As Hansen explains, and as figures 3-5 show, the lattice cells 2 of body 1 include at least six sides: at least 2 first cell sides 3; at least 2 second cell sides 5; and 2 side sections 7. See Hansen at col. 7, lines 8-18 (discussing figure 1 but figures 3-5 have the same referenced features). Nothing in Hansen suggests the use of at least one cell with only 4 sides. As a result, claim 1 and all its dependent claims are neither anticipated nor rendered obvious by Hansen.

**2. Claim 20 and Its Dependents**

Like claim 1, claim 20 has been amended to distinguish Hansen. Claim 20 is directed to a device that includes a body suitable for implantation into an anatomical structure. The body has a first end, a second end and is defined by at least n shape memory wires, the n shape memory wires being arranged such that the body comprises a first portion. The first portion comprises a first woven portion. The shape memory wires of the first woven portion cross each

other to form “a plurality of cells” and “at least one of the cells [is] defined by only four sides.” Hansen fails to teach or suggest such a cell for the same reasons given with respect to claim 1. As a result, claim 20 and all its dependent claims are neither anticipated nor rendered obvious by Hansen.

## **2. Claim 67**

Like claim 1, claim 67 has been amended to distinguish Hansen. Claim 67 is directed to an occluding system that includes a plurality of shape memory wires woven together to form a body useful for occluding an anatomical structure. The shape memory wires cross each other to form “a plurality of cells” and “at least one of the cells [is] defined by only four sides.” Hansen fails to teach or suggest such a cell for the same reasons given with respect to claim 1. As a result, claim 67 is neither anticipated nor rendered obvious by Hansen.

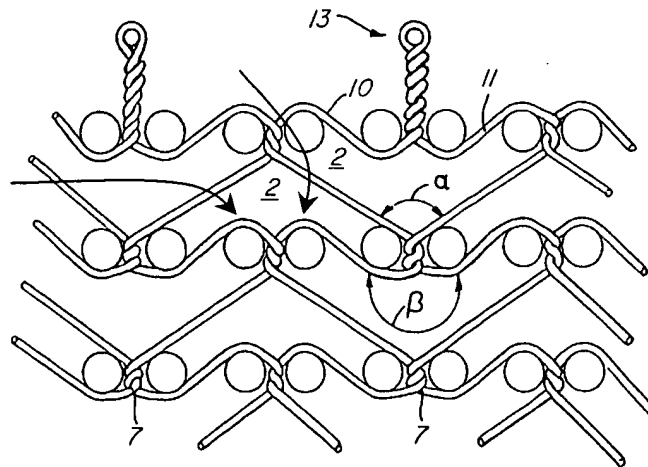
## **4. Claim 68**

Claim 68 is directed to a device that includes a body suitable for implantation into an anatomical structure. The body has an axis, a first end and a second end. The body also includes a shape memory wire having a first segment and a second segment. The first segment extends **helically** in a first direction **around** the axis toward the other end of the body, and the second segment extends **helically** in a second direction **around** the axis toward the other end of the body. Segments 10 and 11 in figure 3 of Hansen do not extend helically around an axis. They stop short of making it all the way around the body as shown in figure 3. There is no suggestion in Hansen that those segments should extend helically around an axis as stated in claim 68. As a result, claim 68 is neither anticipated nor rendered obvious by Hansen.

**5. Claim 69**

Claim 69 is directed to a device that includes a body suitable for implantation into an anatomical structure. The body has a first end and a second end. The body also includes a shape memory wire having a first segment and a second segment. The first and second segments are arranged to form loops and twisted segments such that at least two contiguous loops are separated from another loop by a twisted segment.

In the first Action on which the Office relies in the final Action, the Office asserts that the claimed “loops” are met by bends in the wire segments that contact portions of the pins. Specifically, the Office asserts that the following features, highlighted by Applicants’ arrows, satisfy the claimed “loops”:



*FIG. 4*

While they might qualify as bends, these wire portions are clearly not “loops.” The following definitions of “loop” are taken from Webster’s II New College Dictionary ©1995:

- 1.a.** A length of line folded over and joined at the ends. **b.** The opening formed by such a doubled line. **2.** Something having a roughly oval, closed, or nearly closed turn or figure.

(App. 3). While these definitions are not necessarily controlling, they do show that a “loop” requires more than a bend that does not even approach at least a nearly closed figure. The Office has simply read the term “loop” too broadly. As a result, claim 69 is patentable over Hansen.

#### **6. Claim 70**

Claim 70 has been amended to distinguish Hansen. Support for the amendment may be found, for example, at page 16, lines 15-17 and page 61, lines 17-21. Claim 70 is directed to a device that includes a body suitable for implantation into an anatomical structure. The body has two ends and a shape memory wire that has a first segment and a second segment. The two segments are separated by a bend in the shape memory wire that is located proximate one end of the body. As amended, the two segments are “secured to each other in loop-defining locations, the segments also extending between the loop-defining locations in spaced relation to each other so as to form at least two loops, at least one of the at least two loops having a compressed shape.” Hansen neither teaches nor suggests the two claimed segments.

While there are portions of the segments disclosed in FIG. 5 of Hansen that may be positioned adjacent to each other in loop-defining locations – as originally claimed – there are no segments that are secured to each other in loop-defining locations. Moreover, there is no suggestion in Hansen for securing segments as claimed. As a result, claim 70 is patentable over Hansen.

#### **F. Claim 71 and Its Dependents Are Patentable over the Cited References**

The Office rejects claim 71 and certain of its dependents under 35 U.S.C. § 102(e), or in the alternative under 35 U.S.C. § 103(a), over U.S. Patent No. 6,309,415 to Pulnev et al. (Pulnev). The Office rejects the remainder of claim 71’s dependent claims over Pulnev in view of other patents. Applicants respectfully traverse.

Claim 71 is directed to a device comprising a plurality of shape memory wires woven together to form a body suitable for implantation into an anatomical structure. Both ends of at least one shape memory wire are located proximate one end of the body. Pulnev fails to teach or suggest such a device.

The Office has improperly re-written claim 71 to read on Pulnev. The Office claims that “proximate” is a relative term that requires a comparison. Specifically, the Office states that the wire ends 4 shown in figure 2 of Pulnev (the Office is believed to mistakenly reference figure 4) satisfy the “proximate” limitation because they are “located closer (or more proximate) to the right end than the left end of the body.” Final Action at pages 3-4. Figure 2 of Pulnev is shown below:

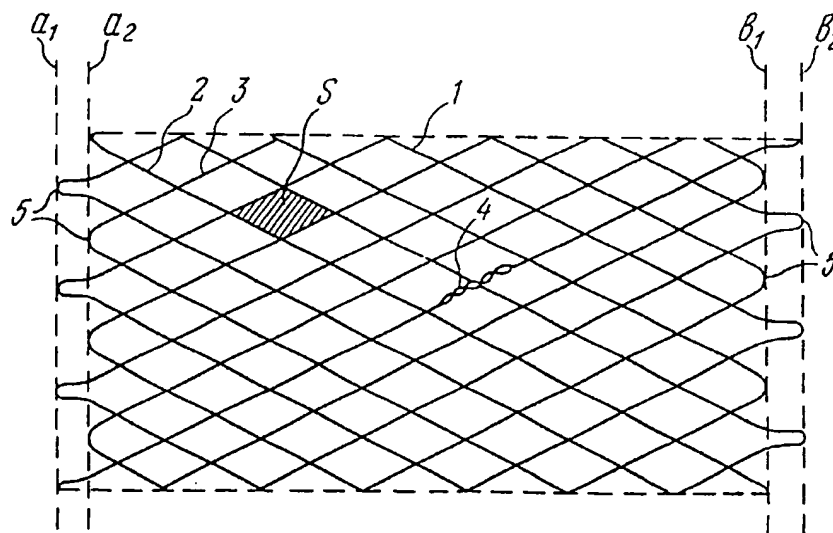


FIG. 2

While the Office’s statement about the position of wire ends 4 is correct – they do appear to be closer to the right end than to the left end of the device – that is not what Applicants are claiming. Applicants are claiming that the wire ends are located proximate “one end of the body,” not “more proximate one end of the body than the other” as the Office asserts. Wire ends 4 in figure 2 of Pulnev are clearly not “proximate” one end of the body. As a result, claim

71 and its dependents are patentable over Pulnev and all the asserted combinations involving Pulnev.

**G. Claim 90 and Its Dependents Are Patentable over the Cited References**

New claims 90-108 are patentable over the cited references. Claim 90 is comparable in scope to claim 71; however, claim 90 specifies that the claimed body has a first end, a second end, and a middle, and "both ends of at least one shape memory wire are located nearer one end of the body than the middle." This configuration is clearly not disclosed or suggested in Pulnev or in any of the combinations involving Pulnev that are cited in the final Action. Thus, claims 90-108 are patentable. By adding these claims, Applicants are in no way agreeing that the term "proximate" in claim 71 is as broad as the Office has construed it in rejecting claim 71.

**H. Conclusion**

Applicants respectfully submit that claims 1-36, and 67-108 are in condition for allowance. Should Examiner Thaler have any questions concerning this application, he is invited to contact Applicants' representative at (512) 536-3031.

Respectfully submitted,



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